

## **APPARATUS USING A LENGTHENED EQUALIZATION TARGET FILTER WITH A MATCHED FILTER METRIC IN A VITERBI DETECTOR**

### **ABSTRACT**

5        An apparatus that uses a lengthened equalization target filter with a matched filter  
metric in a Viterbi detector is disclosed. The equalization target includes a base partial  
response component, i.e.,  $(1-D^2)$ , a fractional coefficient polynomial component to  
whiten the noise, i.e.,  $(1+p_1D+p_2D^2)$ , and a time-reversed replica of the noise-whitening  
component. Thus, the time-reversed replica of the noise-whitening component comes  
10    from what was formerly a matched filter component.